

S/N: 10/034,323
Reply to Office Action of October 18, 2006

Atty Dkt No. 2001-057-SFT (STK01057PUS)

Amendments to the Claims:

Claims 28-40 are pending in this application. Please amend claims 28, 31, 33-35, and 38-40 as follows:

1 28. (currently amended) A method of monitoring data stored on a
2 primary storage system comprising:

3 creating a sequence of mirrors-in-the-middle, each mirror-in-the-
4 middle including a copy of data stored on the primary storage system at a fixed point
5 in time;

6 checking a first mirror-in-the-middle of the sequence of mirrors-in-the-
7 middle to see if a copy of data stored on the first mirror-in-the-middle satisfies at
8 least one consistency constraint; and

9 if not, repeating checking previous mirrors-in-the-middle in the
10 sequence of mirrors-in-the-middle until one of the checked previous mirrors-in-the-
11 middle includes an uncorrupted copy of data satisfying the at least one consistency
12 constraint.

1 29. (previously presented) The method of claim 28 further
2 comprising restoring the uncorrupted copy of data to the primary storage system.

1 30. (previously presented) The method of claim 28 wherein checking
2 comprises scanning for viruses.

1 31. (currently amended) The method of claim 28 wherein checking
2 comprises monitoring a database for consistency of constraints.

1 32. (previously presented) The method of claim 28 further
2 comprising storing the sequence of mirrors-in-the-middle using a data management
3 appliance.

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Atty Dkt No. 2001-057-SFT (STK01057PUS)

1 33. (currently amended) The method of claim 28 further comprising
2 restoring the copy of data stored on the first mirror-in-the-middle to the primary
3 storage system if the copy of data stored on the first mirror-in-the-middle satisfies the
4 at least one consistency constraint.

1 34. (currently amended) The method of claim 28 further comprising:
2 if the copy of data stored on the first mirror-in-the-middle satisfies the
3 at least one consistency constraint, checking a copy of data stored on at least one
4 additional mirror-in-the-middle later in the sequence of mirrors-in-the-middle than the
5 first mirror-in-the-middle to see if the copy of data stored on the at least one
6 additional mirror-in-the-middle satisfies the at least one consistency constraint.

1 35. (currently amended) A data management appliance comprising:
2 a random-access storage unit storing a sequence of mirrors-in-the-
3 middle, each mirror-in-the-middle including a copy of data stored on a primary
4 storage system at a fixed point in time; and
5 control logic in communication with the random-access storage unit,
6 the control logic operative to checking a first mirror-in-the-middle of the sequence
7 of mirrors-in-the-middle to see if a copy of data stored on the first mirror-in-the-
8 middle satisfies at least one consistency constraint and, if not, repeating checking
9 previous mirrors-in-the-middle in the sequence of mirrors-in-the-middle until one of
10 the checked previous mirrors-in-the-middle includes an uncorrupted copy of data
11 satisfying the at least one consistency constraint.

1 36. (previously presented) The data management appliance of claim
2 35 wherein the control logic is further operative to restore the uncorrupted copy of
3 data to the primary storage system.

1 37. (previously presented) The data management appliance of claim
2 35 wherein checking comprises scanning for viruses.

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Atty Dkt No. 2001-057-SFT (STK01057PUS)

1 38. (currently amended) The data management appliance of claim 35
2 wherein checking comprises monitoring a database ~~for consistency of constraints~~.

1 39. (currently amended) The data management appliance of claim 35
2 wherein the control logic is further operative to restore the copy of data stored on the
3 first mirror-in-the-middle to the primary storage system if the copy of data stored on
4 the first mirror-in-the-middle satisfies the at least one consistency constraint.

1 40. (currently amended) The data management appliance of claim 35
2 wherein the control logic is further operative to check a copy of data stored on at
3 least one additional mirror-in-the-middle later in the sequence of mirrors-in-the-
4 middle than the first mirror-in-the-middle to see if the copy of data stored on the at
5 least one additional mirror-in-the-middle satisfies the at least one consistency
6 constraint if the copy of data stored on the first mirror-in-the-middle satisfies the at
7 least one consistency constraint.